

REMARKS

Reconsideration of the application is respectfully requested.

The Office Action rejected claims 76-79, 83-84, and 93-95 under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,656,463 ("Anders et al."). Claims 85-87 and 91-92 were also rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anders et al. Claims 80-83 and 88-90 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Anders et al. in view of U.S. Patent No. 5,325,401 ("Halik et al.")

Applicants respectfully traverse the rejections. Anders et al. does not disclose every element claimed in independent claim 76. For example, Anders et al. does not disclose single sideband transmission. As known to those skilled in the art, in single sideband transmission, the carrier is not transmitted but is reconstructed in the receiver. The Office Action cites column 21, lines 35-65 as allegedly disclosing single sideband transmission. That section, however, specifically describes that its transmitted signals include carrier wave. For instance, Anders et al., in column 21, lines 50-55, discloses that "The correctly encoded signals are passed back into modulator 28 where the carrier wave is added. The encoded signal is amplified in transmitter 29 and the amplified signal activates switch 23 causing a broadcast through antenna 22."

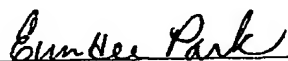
On the other hand, claim 76 recites "single sideband carrier signal" amplified and transmitted via "an amplifier," which signal is communicated to "a second antenna ... wherein low energy input into the antenna is communicated to the second system via the second antenna."

In addition, it appears that Anders et al. is not concerned with using minimum power and energy due to the explosion hazards inside the mines. Rather, Anders et al. when describing its use in connection with a miner, teaches that its device includes a "powerful AT 226" (Column 33, line 38). Accordingly, Anders et al. does not disclose, suggest, or teach using single sideband transmission through the earth, for example, to reduce the amount of needed energy.

For at least the foregoing reasons, Applicants respectfully submit that Anders et al. does not disclose independent claim 76. In addition, Halik does not disclose or suggest or teach what Anders et al. fails to disclose. Accordingly, claim 76 and its dependent claims are believed to be in condition for allowance.

This communication is believed to be fully responsive to the Office Action and every effort has been made to place the application in condition for allowance. If a telephone interview would be of assistance in advancing prosecution of the subject application, the Examiner is requested to telephone the undersigned attorney at the number provided below.

Respectfully submitted,



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